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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/627,516	07/25/2003	Rafiq Hussain	03-04	3274
22443	7590	02/01/2005	EXAMINER	
LAW OFFICE OF MONICA H CHOI			NGUYEN, PHUONGCHI T	
P O BOX 3424			ART UNIT	PAPER NUMBER
DUBLIN, OH 430160204			2833	

DATE MAILED: 02/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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**Office Action Summary**

Application No.

10/627,516

Applicant(s)

HUSSAIN ET AL.

Examiner

Phuongchi Nguyen

Art Unit

2833

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1, 3-15 and 17-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 5, 6, 8-13, 15, 19, 20 and 22-25 is/are rejected.
- 7) ☒ Claim(s) 3, 4, 7, 14, 17, 18, 21, 26 and 27 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

**DETAILED ACTION**

1. The request filed on December 23, 2004 for a Request for Continued Examination (RCE) under 37 CFR 1.114 based on parent Application No. 10/627,516 is acceptable and a RCE has been established
2. Applicant's amendment of December 23, 2004 is acknowledged. It is noted that claims 1, 3, 5-7, 12, 14-15, 17 and 20-21 are amended. Claims 2 and 16 are canceled. New claims 26-27 are amended.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1, 5, 6, 8, 10-13, 15, 19, 20, 22, 24 and 25 are rejected under 35 U.S.C. 102(e) as being anticipated by Scott (US6746252B1).

In regarding to claim 1, Scott discloses (figures 3 and 7) a socket system for coupling a pin (22) of an IC (integrated circuit) device (14) (column 4, lines 35-39) to a contact pad (64) of a circuit board (66), comprising a zif (zero-insertion-force) opening (38) (because the diameter of pin 22 is smaller than the diameter of opening 38; therefore, no force is needed to insert the pin 22 into the opening 38) on a socket (34) that asserts substantially zero force (on the pin) as the pin (22) of the IC device (14) is inserted therein,

a compression mount lead (60) disposed on the socket (34), wherein the compression mount lead (60) includes a compression mechanism (62) that compresses the compression mount lead (60) against the contact pad (64) of the circuit board (66) with a compressive force (because the height of the lead 60 is equal to the height of the socket 34; therefore, when the socket 34 locates directly on the contact 64, the lead 60 will touch the contact pad 64 of the PCB 66); and a mechanism (26) for coupling the pin (22) to the compression mount lead (24) .

In regarding to claim 5, Scott discloses the socket system (figure 2) wherein the compression mount lead mechanism (60) is comprised of a pogo spring.

In regarding to claim 8, Scott discloses the socket system wherein substantially zero force is asserted on the body of the IC device (14) when the pin (22) is coupled to the contact pad (64).

In regarding to claims 10, 11, 24 and 25, Scott discloses the socket system wherein the socket (34) and the circuit board (66) are part of a test system for testing the IC device (Column 4, line 34) and can be parts for an OEM (original equipment manufacturer) machine (since OEM is a board term to described any machine).

In regarding to claim 12, Scott further discloses the socket system for coupling a pin (22) of an IC (integrated circuit) device (14) to a contact pad (64) of a circuit board (66), comprising means (of ZIF opening) for asserting substantially zero force on the pin (22) of the IC device (14) as the pin (22) is inserted into a zif (zero-insertion-force) opening (38) on a socket (34); means (of spring 24) for compressing a compression mount lead (60) against the contact pad (64) of the circuit board (66) with a compressive force; and means (of screw 26) for coupling the pin (22) of the IC device within the zif opening (38) to the compression mount lead (60).

In regarding to claim 13, Scott discloses the socket system further comprising means (of placing the bottom housing portion of device 14 seating on the top portion of socket 34) for minimizing an electrical path length between the IC device (14) and the circuit board (66).

In regarding to claims 6 and 20, Scott discloses the socket system wherein the compression mount lead (60) is comprised of a J-bend lead that is compressed against the contact pad (64) of the circuit board (66) (because the height of the lead 60 is equal to the height of the socket 34; therefore, when the socket 34 locates directly on the contact 64, the lead 60 will touch the contact pad 64 of the PCB 66).

In regarding to claims 15, 19, 22 the method is inherent to the devices.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 9 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Scott (US6746252B1) in view of Alden, 3<sup>rd</sup> et al (US6280202B1).

In regarding to claims 9 and 23, Scott discloses the invention, but lacks a back plate. However, Alden teaches the backplane (80) mounted to the back side of the circuit board (60) when the socket (50) mounted to the front side of the circuit board (60) (figure 1). It would have been obvious to one having ordinary skill at the time the invention was made to add on the

socket system of Scott a back plate as taught by Alden to support and protect the socket and the printed circuit from damage by surrounding environment.

***Response to Arguments***

7. Applicant's arguments with respect to claims 1, 3-15 and 17-27 are have been considered but are moot in view of the new ground(s) of rejection.

***Allowable Subject Matter***

8. Claims 3-4, 7, 14, 17-18, 21, 26 and 27 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

9. The following is a statement of reasons for the indication of allowable subject matter:

In regarding to claims 3, 14, 17, 26 and 27, none of prior art teaches or suggests the socket system wherein an actuation lever (or means or macheniiazim) presses the forking leads against the pin with the actuation plate in only one lateral direction that is perpendicular to the length of the pin.

In regarding to claims 7, 21, the prior art fails to teach or suggest the socket system wherein the compression mount lead in the socket is compressed against the contact pad of the printed circuit board.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phuongchi Nguyen whose telephone number is (571) 272-2012. The examiner can normally be reached on 8:00AM-4:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paula Bradley can be reached on (571) 272-2800 ext 33. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

PCN January 17, 2004



**ROSS GUSHI**  
**PRIMARY EXAMINER**